

1 **WO**

2

3

4

5

6 IN THE UNITED STATES DISTRICT COURT  
7 FOR THE DISTRICT OF ARIZONA

8

9 COMTECH EF DATA CORP., ) No. CV 06-1132-PHX-MHM

10 Plaintiff, )

**ORDER**

11 v. )

12

13 RADYNE CORP., )

14 Defendant. )

15

16

17 Currently before the Court is Special Master Robert Harmon’s (“Mr. Harmon” or  
18 “Special Master”) Report and Recommendation on claim construction (Dkt. #97); Defendant  
19 Radyne Corporation’s (“Radyne”) motion to modify the Special Master’s Report and  
20 Recommendation pursuant to Rule 53(f)(2) of the Federal Rules of Civil Procedure  
21 (“FRCP”) (Dkt. #78); Plaintiff Comtech EF Data Corporation’s (“Comtech”) motion to adopt  
22 the Special Master’s Report and Recommendation with one modification pursuant to FRCP  
23 53(f)(2) (Dkt. #76); Comtech’s motion to strike the declaration of Roderick Kronschnabel  
24 (Dkt. #66); Comtech’s motion to strike unsupported attorney argument regarding technical  
25 matters (Dkt. #68); and Comtech’s motion to strike Radyne’s reply memorandum (Dkt. #87).  
26 After reviewing the pleadings and the Special Master’s Report and Recommendation, the  
27 Court issues the following Order.

28 ///

///

1 **I. PROCEDURAL HISTORY**

2 On April 21, 2006, Comtech filed suit against Radyne asserting a claim of patent  
3 infringement against Radyne with respect to United States Patent No. 5,666,646 (“the ‘646  
4 patent”), which claims a radio frequency (RF) converter system for transmission of  
5 communication signals. (Dkt. #1). On October 17, 2006, based on a joint submission by the  
6 Parties, the Court appointed Mr. Harmon to act as Special Master in this case pursuant to  
7 FRCP 53 and conduct a Markman hearing in order to provide the Court with a recommended  
8 construction of the asserted claims of the ‘646 patent. (Dkt. #27). The parties submitted  
9 briefing on claim construction, and along with its reply claim construction brief, Comtech  
10 filed two motions to strike, one directed at the declaration of Roderick Kronschnabel, one of  
11 Radyne’s expert witnesses, and the other directed at “unsupported attorney argument  
12 regarding technical matters.” (Dkt. #s 66, 67). The Special Master held the Markman  
13 hearing on May 3, 2007 (Dkt. #97); and after the Special Master issued his Report and  
14 Recommendation to the Court, the parties filed motions to adopt the Report and  
15 Recommendation with certain modifications (i.e., objections). (Dkt. #s 76, 78). On May 29,  
16 2007, Comtech filed a motion to adopt the Report and Recommendation with an objection  
17 to the recommendation that claim 7 of the ‘646 patent be held invalid under 35 U.S.C. §112,  
18 ¶ 2. (Dkt. #76). Then, on May 30, 2007, Radyne filed a motion to modify the Report and  
19 Recommendation, objecting to the recommendations regarding the construction of the word  
20 “when” and the applicability of 35 U.S.C. § 112, ¶ 6. (Dkt. #78). In addition, on May 31,  
21 2007, Radyne filed a motion for summary judgment of non-infringement (Dkt. #79);  
22 however, on February 21, 2008, the Court noted that Radyne’s motion was premature and  
23 denied the motion without prejudice and with leave to refile once the Court ruled on the  
24 parties’ objections to the Special Master’s Report and Recommendation. (Dkt. #98).

25 **II. STANDARD OF REVIEW**

26 In reviewing the Special Master’s Report and Recommendation, the Court reviews de  
27 novo all objections to the findings of fact and/or conclusions of law made or recommended  
28

1 by the Special Master. See Fed.R.Civ.P. 53(g)(3)&(4). In addition, the Court reviews  
2 matters of procedure for abuse of discretion. See Fed.R.Civ.P. 53(g)(5).

3 The construction of the claims and terms in a patent is a question of law for the Court.  
4 Markman v. Westview Instruments, Inc., 52 F.3d 967, 983-84 (Fed. Cir. 1995). “It is a  
5 ‘bedrock principle’ of patent law that ‘claims of a patent define the invention to which the  
6 patentee is entitled the right to exclude.’” Phillips v. AWH Corp., 415 F.3d 1303, 1312 (Fed.  
7 Cir. 2005) (en banc) (citation omitted). The terms in a patent’s claims “are generally given  
8 their ordinary and customary meaning.” Id. at 1312 (citing Vitronics Corp. v. Conceptoronic,  
9 Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). “The ordinary and customary meaning of a claim  
10 is the meaning that the term would have to a person of ordinary skill in the art in question at  
11 the time of the invention . . . .” Id. at 1313. A person of ordinary skill in the art “is deemed  
12 to read the claim not only in the context of the particular claim in which the disputed term  
13 appears, but in the context of the entire patent, including the specification.” Id.

14 In cases where the ordinary meaning of claim language is not readily apparent to a lay  
15 judge, “the courts look to ‘those sources available to the public that show what a person of  
16 skill in the art would have understood disputed claim language to mean.’” Id. at 1314  
17 (quoting Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc., 381 F.3d 1111,  
18 1116 (Fed. Cir. 2004)). “Those sources include ‘the words of the claims themselves, the  
19 remainder of the specification, the prosecution history, and extrinsic evidence concerning  
20 relevant scientific principles, the meaning of technical terms, and the state of the art.’” Id.  
21 (citation omitted). The Court may also, in its sound discretion, receive extrinsic evidence to  
22 aid the Court in coming to a correct conclusion as to the true meaning of language employed  
23 in the patent. Markman, 52 F.3d at 980. “Extrinsic evidence consists of all evidence external  
24 to the patent and prosecution history, including expert and inventor testimony, dictionaries,  
25 and learned treatises.” Id. However, extrinsic evidence is less significant than intrinsic  
26 evidence in determining the correct meaning of claim language, and it “is unlikely to result  
27 in a reliable interpretation of a patent claim scope unless considered in the context of the  
28 intrinsic evidence.” Phillips, 415 F.3d at 1317-18 (“[A] court should discount any expert

1 testimony that is clearly at odds with the claim construction mandated by the claims  
2 themselves, the written description, and the prosecution history, in other words, with the  
3 written record of the patent.”) (citation and quotation omitted).

## 4 5 **II. COMTECH’S MOTIONS TO STRIKE**

6 On April 25, 2007, approximately two weeks prior to the May 3, 2007 Markman  
7 hearing, Comtech moved the Court to strike the declaration of Roderick Kronschnabel and  
8 a motion to strike “unsupported attorney argument regarding technical matters.” (Dkt. #s 66,  
9 67). In its responses to Comtech’s motions to strike, Radyne notes that the Special Master  
10 considered Comtech’s motions to strike in his Report and Recommendation and issued a  
11 recommendation that the Court deny both motions to strike. (Dkt. #s 71, 72). In addition,  
12 in its reply, Comtech states that it does not object to the Court adopting the Special Master’s  
13 recommendations denying its motions to strike the declaration of Roderick Kronschnabel and  
14 to strike attorney argument regarding technical matters. (Dkt. #73, p.2). As such, having  
15 reviewed the Special Master’s recommendation to the Court to deny Comtech’s motions to  
16 strike, and finding the recommendation unopposed by the parties and supported by the  
17 record, the Court denies Comtech’s motions to strike.

18 In addition, on June 28, 2007, Comtech moved the Court to strike Radyne’s reply  
19 memorandum on its motion to modify the Special Master’s Report and Recommendation.  
20 (Dkt. #87). Comtech contends that the Court’s October 12, 2006 order did not authorize the  
21 parties to file a reply memorandum in support of their FRCP 53(g) objections to the Report  
22 and Recommendation. (Dkt. #87, p.1). Comtech notes that the Court’s October 12, 2006  
23 order merely refers to the parties’ submissions of written objections to the Special Master’s  
24 Report and Recommendation and the parties’ responses to those objections; the Court’s order  
25 does not address whether or not the parties’ may file reply memorandum in the context of  
26 objections to the Report and Recommendation (Dkt. #87, p.2; Dkt. #27, p.2). In response,  
27 Radyne notes that L.R.Civ. 7.2(d) states that “[t]he moving party, unless otherwise ordered  
28

1 by the Court, shall have five (5) days after service of the responsive memorandum to file a  
2 reply memorandum if that party so desires.” (Dkt. #88, pp. 1-2).

3 The Court’s October 12, 2006 order does not contemplate that reply memorandum  
4 would be submitted in the context of the parties’ written objections to the Special Master’s  
5 Report and Recommendation. However, the Court notes that its order does not explicitly  
6 state that it would not accept and consider reply memorandum in this context. Further, the  
7 Court notes that Comtech also filed a reply memorandum on its motion to adopt the Special  
8 Master’s Report and Recommendation with one modification. (Dkt. #93). As such, pursuant  
9 to L.R.Civ. 7.2(d), the Court will deny Comtech’s motion to strike Radyne’s reply  
10 memorandum and consider both parties’ reply memorandum on the parties’ motions to adopt  
11 and modify the Special Master’s Report and Recommendation.

### 12 13 **III. COMTECH’S MOTION TO ADOPT AND MODIFY THE SPECIAL** 14 **MASTER’S REPORT AND RECOMMENDATION**

15 Comtech moves the Court to adopt the Special Master’s Report and Recommendation  
16 on claim construction of the ‘646 patent with one modification. Specifically, Comtech  
17 objects to the Special Master’s recommendation that claim 7 of the ‘646 patent be held  
18 invalid under 35 U.S.C. § 112, ¶ 2. Comtech requests that the Court reject the Special  
19 Master’s conclusion that the errors in claim 7 render the claim indefinite and invalid under  
20 35 U.S.C. § 112, ¶ 2, and instead adopt Comtech’s proposed corrections because the errors  
21 in claim 7 are obvious and not subject to reasonable debate in light of the patent  
22 specification, and thus are readily subject to correction.

23 A patent's specification must “conclude with one or more claims particularly pointing  
24 out and distinctly claiming the subject matter which the applicant regards as his invention.”  
25 35 U.S.C. § 112, ¶ 2. “The claims must use language definite enough to notify the public of  
26 the patentee's right to exclude.” Fargo Electronics, Inc. v. Iris Ltd., Inc., 2005 WL 3241851  
27 at \*3 (D.Minn. 2005) (citing Datamize, LLC v. Plumtree Software, Inc., 417 F.3d 1342, 1347  
28 (Fed. Cir. 2005)). Whether a claim is sufficiently definite involves the Court's duty of claim

1 construction; indefiniteness is a question of law for the Court. See Atmel Corp. v.  
2 Information Storage Devices, Inc., 198 F.3d 1374, 1378 (Fed. Cir. 1999); see also Process  
3 Control Corp. v. HydReclaim Corp., 190 F.3d 1350, 1356 (Fed. Cir. 1999) (stating that a  
4 court should attempt to construe patent claims to preserve their validity, reading them in light  
5 of the specification).

6 A claim must be held “invalid for indefiniteness [if] it is ‘insolubly ambiguous’ and  
7 not ‘amenable to construction.’” Novo Industries, L.P. v. Micro Molds Corporation, 350  
8 F.3d 1348, 1358 (Fed. Cir. 2003) (quoting Exxon Research & Eng’g Co. v. United States,  
9 265 F.3d 1371, 1375 (Fed. Cir. 2001). However, a district court can correct errors in a patent  
10 “if (1) the correction is not subject to reasonable debate based on consideration of the claim  
11 language and the specification and (2) the prosecution history does not suggest a different  
12 interpretation of the claims.” Id. at 1357. As such, “certain obvious errors in the patent can  
13 be corrected by the district court in construing the patent.” Id. at 1355; see also Steven M.  
14 Hoffer v. Microsoft Corporation, 405 F.3d 1326, 1331 (Fed. Cir. 2005) (“When a harmless  
15 error in a patent is not subject to reasonable debate, it can be corrected by the court, as for  
16 other legal documents.”).

17 If an error in a patent claim is obvious and apparent from the face of the patent, i.e.,  
18 the patent specification and drawings, and the correction is not subject to reasonable debate  
19 or contradicted by the prosecution history, then a district court may correct the error. Hoffer,  
20 405 F.3d at 1331; see also Superior Fireplace Co. v. Majestic Products Co., 270 F.3d 1358,  
21 1369-70 (Fed. Cir. 2001) (a correction of a clerical or typographical error that broadens the scope  
22 of coverage of a claim is allowed only where it is clearly evident from the specification, drawings,  
23 and prosecution history how the error should appropriately be corrected). In addition, “[a]bsent  
24 evidence of culpability or intent to deceive by delaying formal correction, a patent should not  
25 be invalidated based on an obvious administrative error.” Hoffer, 405 F.3d at 1331.

26 Comtech states the errors in claim 7 were included “when the claim was amended in  
27 response to an office action.” (Dkt. #76, p.2). Comtech’s requested corrections involve  
28 certain written instances and placement of the terms radio frequency (“RF”) and intermediate

1 frequency (“IF”) that occur at the end of claim 7 in the ‘646 patent. Specifically, Comtech  
2 requests that the Court change three instances in claim 7 of “inputted IF” to read “inputted  
3 RF” and two instances of “desired [outputted] RF” to “desired [outputted] IF.” For an  
4 example of Comtech’s requested corrections to claim 7, see Exhibit 2 of Radyne’s response  
5 in opposition to Comtech’s instant motion (Dkt. #85). Comtech states that there is no dispute  
6 that claims 1 through 6 of the ‘646 patent are directed to up converters for transmitting  
7 signals to a satellite, and in an up converter, the input is an IF signal and the output is an RF  
8 signal; and by the same token, Comtech states that claim 7 is directed to a down converter  
9 for receiving communication signals from a satellite, and in a down converter, the input is  
10 an RF signal and the output is an IF signal. (Dkt. #76, p.2). To support the proposition that  
11 claim 7 involves a down converter, Comtech cites the Court to both the patent specification  
12 that states that “down converters are used to receive communication signals from a satellite”  
13 and the preamble to claim 7 that it involves “[a]n RF converter system for receiving  
14 communication signals . . . .” (Id.). Also, in its reply, Comtech cites the Court to Figure 6  
15 of the ‘646 patent to support its contention that the patent invention includes down converter  
16 systems within its scope. (Dkt. #93, pp. 3-4).

17 The Special Master considered Comtech’s requested corrections and concluded that  
18 claim 7 is insolubly ambiguous and cannot be construed as requested; the Special Master  
19 recommended that claim 7 be held invalid under 35 U.S.C. § 112, ¶2.<sup>1</sup> Although the Special  
20 Master cited Novo and recognized the Court’s authority to correct a patent on its own, in  
21 making his recommendation the Special Master relied on Process Control for the proposition  
22 that “when an impossible limitation, such as a nonsensical method of operation, is clearly  
23 embodied within the claim, the claimed invention must be held inoperable, pursuant to 35  
24 U.S.C. §§ 101 and 112.” (Report and Recommendation, Dkt. #97, p.23). As such, the  
25 Special Master concluded the following:

---

26  
27 <sup>1</sup>However, the Special Master nevertheless construed the various elements of claim  
28 7 along with those of the other claims “[a]gainst the possibility that the Court may disagree  
with [the Special Master’s] recommendation” on this issue.

1 In the view of the [Special Master], the present situation falls squarely within  
2 the rationale of Process Control. The only reasonable construction of claim 7  
3 is that it contains internal inconsistencies that render it inoperative and  
4 nonsensical. One cannot, by looking at the intrinsic evidence of record,  
5 conclude that the correction proposed by Comtech is ‘not subject to reasonable  
6 debate,’ within the meaning of Novo. Clearly, there are at least two possible  
7 corrections that would render the claim amenable to construction: the claim  
8 could be rewritten to make all references read “inputted RF” or alternatively  
9 to make them read “inputted IF.” Nor does Comtech point to anything in the  
10 prosecution history that compels one such revision over the other. Thus,  
11 Comtech cannot meet the limited circumstances outlined in Novo that might  
12 permit the Court to redraft the claims.

13 (Dkt. #97, pp. 23-24). The Court disagrees with this conclusion and recommendation.

14 Comtech does not disagree with the Special Master’s conclusion that claim 7, as  
15 written, is inoperative and nonsensical. Further, there is no indication that the prosecution  
16 history of the ‘646 patent suggests any particular interpretation of claim 7, and thus the  
17 prosecution history appears to have no apparent effect on the proposed corrections. As such,  
18 the question regarding whether Comtech’s proposed corrections to claim 7 are appropriate  
19 revolves around the first prong in Novo, i.e., whether the correction is subject to reasonable  
20 debate based on consideration of the claim language and the specification.

21 First, the Court notes that Process Control stands for the proposition that if a claim  
22 term is susceptible to only one reasonable interpretation, and that interpretation makes the  
23 claim nonsensical, then the claim is invalid. See Banyan Licensing, L.C. v. Orthosupport  
24 Intern., Inc., 34 Fed.Appx. 696, 698 (Fed. Cir. 2002). However, Process Control, which  
25 preceded Novo, is distinguishable and not dispositive on the facts of this case. Process  
26 Control involved a patentee’s argument that the exact phrase that appeared in two different  
27 claim limitations had two different meanings within the same claim; the court rejected that  
28 argument and held that the phrase used in the same way in the same claim had to be  
interpreted in the same way, and under that construction the claim made no sense and was  
thus invalid. 190 F.3d at 1356-58. Process Control, unlike Novo, did not involve a  
patentee’s request to correct errors in a patent and thus whether the patentee’s proposed  
correction is susceptible to to reasonable dispute. Indeed, the Special Master’s reference to  
the Federal Circuit’s statement in Process Control that “we do not permit courts to redraft

1 claims” is applicable to this case only insofar as Comtech’s proposed corrections are viewed  
2 as an attempt to redraft claim 7 as opposed to an attempt to correct errors that are obvious  
3 and not subject to reasonable debate under Novo.

4 Here, Comtech does not contest the fact that claim 7, as written, makes no sense and  
5 describes a system that would not be operative for “receiving communication signals.”  
6 Instead, Comtech proposes to rectify the nonsensical nature of claim 7 by having the Court  
7 rewrite the claim, by construction, pursuant to the standard set forth by the Federal Circuit  
8 in Novo. As such, the Court rejects the Special Master’s recommendation to the extent that  
9 the Special Master relied on the Federal Circuit’s decision in Process Control to support his  
10 conclusion that Comtech’s proposed correction to claim 7 of the ‘646 patent is subject to  
11 reasonable debate based on a consideration of the claim language and specification.  
12 However, the Court must still address the Special Master’s conclusion that one cannot  
13 conclude that Comtech’s proposed correction is “not subject to reasonable debate” by  
14 looking at the intrinsic evidence of the patent within the meaning of Novo, and that “there  
15 are at least two possible corrections that would render the claim amenable to construction:  
16 the claim could be rewritten to make all references read ‘inputted RF’ or alternatively to  
17 make them read ‘inputted IF.’”

18 In its response, Radyne asks the Court to reject Comtech’s proposed correction and  
19 adopt the Special Master’s recommendation that claim 7 be held invalid. Radyne contends  
20 that Comtech offers no evidence to support a finding that the errors in claim 7 were due to  
21 administrative error (Dkt. #85, p.2); that the holding in Novo and its progeny provides no  
22 support for Comtech’s proposed correction (id.); that Comtech made no effort to correct the  
23 patent for nearly ten years (id. at p.6)<sup>2</sup>; that Comtech’s proposed correction would result in

---

24  
25 <sup>2</sup>The Court notes that both Radyne and the Special Master refer to the fact that  
26 “Comtech has let ten years go by without making any effort at correction [of the ‘646 patent]  
27 by proper means.” (Dkt. #97, p.25). However, there is nothing in the record or the  
28 prosecution history of the ‘646 patent to suggest that Comtech was aware of the error in the  
patent prior to the onset of this litigation. In addition, neither Radyne nor the Special Master  
cite any authority to indicate that the fact that Comtech did not correct the error in the ‘646

1 surprise and unanticipated broadening of the scope of the '646 patent (id. at p.3).  
2 Specifically, Radyne contends that Comtech's proposed correction is subject to reasonable  
3 debate, because there are two equally plausible choices to correct the claim language in claim  
4 7: (1) the last three references to "inputted IF" can be changed to "inputted RF" and the last  
5 two references to "desired RF" can be changed to "desired IF" (id., Exhibit 2); or (2) the first  
6 four references to "inputted RF" can be changed to "inputted IF" and the first three  
7 references to "desired IF" can be changed to "desired RF" (id., Exhibit 1). Radyne states that  
8 Novo does not support Comtech's proposed correction because in Novo, the Federal Circuit  
9 reversed a district court because the lower court did not have the authority to correct a patent  
10 claim by changing the word "a" to "and." (Id. at p.2). In addition, Radyne states that Fargo  
11 Electronics, 2005 WL 3241851 (D.Minn. 2005), among other cases, supports its contention  
12 that "this Court would have to engage in conjecture in attempting to select between the  
13 corrected version of claim 7 proposed in Radyne Exhibit 1 and the corrected version of claim  
14 7 in Radyne Exhibit 2." The Court disagrees.

15 The Special Master stated that "Claims 1 and 3-5 are directed to a radio frequency  
16 (RF) converter system 'for transmission of communication signals.' In keeping with this  
17 functional purpose, the various claimed elements of the system refer to such functions as  
18 'modulating an inputted intermediate frequency (IF) and outputting a desired RF.' Claim 7,  
19 on the other hand, is directed to an RF converter system 'for receiving communications  
20 signals.'" (Dkt. #97, p.21). As such, the Special Master stated that "[n]aturally and logically,  
21 then, one would expect the functional language [in claim 7] to be the reverse of that in claims  
22 1 and 3-5, e.g., 'modulating an inputted RF and outputting a desired IF.' And so it is, at least  
23 for the first part of claim 7. But this concordance does not persist throughout the entire  
24 claim." (Id.). Based on comparison of claims 1 and 3-5 and claim 7, the Special Master  
25 concluded that "[i]t is clear that a mistake was made, and that the claim drafter doubtless

26 \_\_\_\_\_  
27 patent within the last ten years is either dispositive or compelling with respect to the Court's  
28 authority under Novo to correct an obvious error in a patent claim that is not subject to  
reasonable debate.

1 intended claim 7 to be functionally consistent throughout, one way or the other.” (Id. at  
2 p.22). Thus, since the prosecution history does not suggest a particular correction one way  
3 or the other, the question boils down to whether the patent claims, specification, and  
4 drawings clearly establish that Comtech’s proposed correction is not subject to reasonable  
5 debate.

6 The specification and drawings in the ‘646 patent clearly indicate, as the Special  
7 Master recognized, that the ‘646 patent contemplated an RF converter system that involved  
8 both up converters (used to transmit communication signals) and down converters (used to  
9 receive communication signals from a satellite). (Dkt. #93, pp. 3-4; Dkt. #97, p.15). In fact,  
10 as Comtech points out, Radyne also recognized that claim 7 was directed to a down converter  
11 system, as Radyne stated in the parties’ February 2007 Joint Claim Construction and  
12 Prehearing Statement that “[c]laim 7 is directed to a down converter system, and as such, the  
13 claim limitation [monitor/control means] should properly refer to ‘said inputted RF’ (the  
14 higher frequency), not IF (the lower frequency).” (Dkt. #93, p.4). As such, Radyne’s  
15 previous statements, as well as specification and drawings in the ‘646 patent, which states  
16 that “FIG. 6 shows a simplified block diagram of one embodiment of the distributed  
17 switching RF down converting system of the present invention” (U.S. Patent No. 5,666,646),  
18 foreclose Radyne’s present argument that Comtech’s proposed correction would result in  
19 surprise and unanticipated broadening of the scope of the ‘646 patent.

20 As for Radyne’s contention that there are two equally plausible ways of correcting  
21 claim 7, Radyne states that just because claim 7 starts off with the words “[a]n RF converter  
22 system for receiving communication signals,” doesn’t mean that the claim must be changed  
23 so that the input is always an RF signal because the patent specification states that RF up-  
24 converters receive communications as well, i.e., they receive IF signals and output RF  
25 signals, and thus claim 7 could refer to an up-converting system rather than a down-  
26 converting system. (Dkt. #85, p.9). Although Radyne is correct that an up-converting RF  
27 converter system for transmission of communication signals, such as that described in claim  
28 1 and 3-5 of the ‘646 patent, receives communication signals, i.e. receives IF signals and

1 outputs RF signals, the use of “[a]n RF converter system for receiving communication  
2 signals” in the preamble to claim 7 clearly indicates that the use of “receiving” in that context  
3 refers to a down-converting system, and not the actual function of receiving any particular  
4 signal, just as the use of “[a] radio frequency (RF) converter system for transmission of  
5 communication signals” in the preamble to claim 1 clearly refers to an up-converting system.  
6 If the Court were to hold otherwise, then the Court would read out of the ‘646 patent any  
7 claim of a down-converting system, which is clearly contemplated and indicated by the  
8 patent specification and drawings. In addition, Radyne’s suggested alternate correction  
9 would blur any distinction whatsoever between claims 1 and 3-5 and claim 7, thus rendering  
10 claim 7 superfluous and unnecessary; in essence, Radyne’s suggested alternate correction  
11 would convert Figure 6 into Figure 1. As such, although the Court accepts Radyne’s  
12 contention that there are theoretically two possible ways to correct claim 7 in the ‘646 patent,  
13 the Court finds that the patent specification and diagrams in the ‘646 patent, clearly establish  
14 that the Court need not engage in conjecture to find that Comtech’s proposed correction is  
15 the only reasonable correction, and thus not subject to reasonable debate.

16 In addition, contrary to Radyne’s contentions, the holdings in Novo and its progeny  
17 do not mandate a finding that Comtech’s proposed correction, in light of the patent  
18 specification and diagrams, is subject to reasonable debate. In Novo, the Federal Circuit  
19 stated that although a court could correct certain obvious errors in a patent if the correction  
20 was not subject to reasonable debate and the prosecution history did not indicate otherwise,  
21 the facts of the case, as well as the figures of the patent, did not support correction because  
22 there were multiple ways that the error could be corrected, including adding any number of  
23 words to the claim, which would then provide clarity and make the claim unambiguous.  
24 However, here, there are only two possible corrections that theoretically could be made, one  
25 of which the Court finds clearly unreasonable in light of the patent specification and  
26 diagrams.

27 In addition, in Fargo Electronics, the district court rejected the plaintiff’s proposed  
28 correction because although the proposed correction was consistent with the language of the

1 claims and specification, it found that it was not the only reasonable correction since the  
2 claim's language was broad and it was natural to read the claim as encompassing more than  
3 the limiting construction that plaintiff's proposed correction would place on the claim.  
4 However, as with Novo, this case is inapposite because here there is only one other  
5 theoretical correction, and, as stated by the Special Master, Plaintiff's proposed correction  
6 is the natural and logical correction in light of claim 7's interaction with claims 1 and 3-5 and  
7 the patent specification and diagrams.

8 This is not a case that involves a proposal to correct an incomplete phrase or an  
9 attempt to add some unknown missing word. This case is much more akin to I.T.S. Rubber  
10 Co. v. Essex Rubber Co., 272 U.S. 429, 442-43 (1926), where the Supreme Court upheld a  
11 district court's decision to add the word "rear" to a claim because it had appeared in other  
12 claims in the patent and its addition was not a re-making of the claim since if the Court were  
13 to construe the claim not to include the word "rear," then the claim would not read on the  
14 specification and drawings of the patent. See Novo, 350 F.3d at 1355. Here, Comtech's  
15 proposed correction to the errors in claim 7 was clearly and naturally intended to be the  
16 reverse of that in claim 1 and is not a remaking of the claim because it is the only reasonable  
17 correction of the two possible corrections in light of the patent specification and diagrams  
18 that clearly indicate that the patent encompasses a down-converting system that takes  
19 inputted RF and outputs desired IF. Like in Essex, if the Court did not adopt Comtech's  
20 proposed correction in this case, then claim 7 would not read on the specification and  
21 drawings of the '646 patent. Accordingly, for the reasons stated above, the Court will not  
22 adopt the Special Master's proposed construction and will sustain Comtech's objection to the  
23 Report and Recommendation and correct claim 7 of the '646 patent in accordance with  
24 Comtech's proposed correction.

25  
26 **IV. RADYNE'S MOTION TO MODIFY THE SPECIAL MASTER'S REPORT**  
27 **AND RECOMMENDATION**  
28

1           Radyne objects to the Special Master’s Report and Recommendation on claim  
2 construction of the ‘646 patent with respect to (1) the Special Master’s construction of the  
3 term “when”; and (2) the Special Master’s Report and Recommendation concerning the  
4 applicability of 35 U.S.C. § 112, ¶ 6.

5           **A.     The Term “When”**

6           Radyne objects to the Special Master’s recommendation that word “when” be given  
7 the meaning “promptly and automatically” when used in the phrase “when said fault is  
8 detected,” but that it be given the meaning “after” when used in the phrase “when said first  
9 RF converter means is cleared of said fault.” (Dkt. #78, p.2; Dkt. #97, p.54). The specific  
10 portion of claim 1 at issue here is the following:

11           [S]witching means for switching said inputted IF and said desired RF from  
12 said first RF converter means to said backup RF converter means when said  
13 fault is detected on said first RF converter means and from said backup RF  
converter means back to said first RF converter means when said first RF  
converter means is clear of said fault.

14 (Dkt. #83, p.4) (emphasis in original). Radyne contends that the Special Master erred in  
15 concluding that the two instances of the word “when” in the context of “switching means”  
16 limitation of claim 1 should be given two different meanings because “case law [dictates] that  
17 the same word should normally be given the same meaning everywhere it appears in a set of  
18 patent claims, even if it appears only once in different individual patent claims.” (Dkt. #86,  
19 p.2).<sup>3</sup> Specifically, Radyne contends that the word “when,” as used throughout the ‘646  
20 patent, should be given the meaning “promptly and automatically.” (Id., pp. 3-4).

21           Radyne cites the Court to Fin Control Sys. Pty., Ltd. v. OAM, Inc., for the proposition  
22 that a “presumption that the same terms appearing in different portions of the claims should  
23 be given the same meaning unless it is clear from the specification and prosecution history  
24

---

25           <sup>3</sup>The Court notes that Radyne seems to ignore its own statement that “the same word  
26 should normally be given the same meaning.” (Dkt. #86, p.2) (emphasis added). As such,  
27 Radyne appears to recognize that the Court is not foreclosed from determining whether a  
28 particular word should be given a different meaning depending on the context in which it is  
used if such a construction is warranted by the claim language and the patent specification.

1 that the terms have different meanings at different portions of the claims.” 265 F.3d 1311,  
2 1318 (Fed. Cir. 2001) (emphasis in original). However, the Special Master addressed this  
3 specific argument and quotation from Fin Control in his Report and Recommendation. The  
4 Special Master concluded that the Fin Control presumption “is readily overcome in this case  
5 by [ ] the patent specification.” (Dkt. #97, p.54). The Special Master noted that “[o]bviously  
6 the word ‘when’ has many meanings, and to select ‘as soon as’ or promptly’ would require  
7 some rational basis in the intrinsic evidence.” (Id. at p.53). To support his conclusion, the  
8 Special Master referenced the following passage from the specification of the ‘646 patent:

9           When a fault occurs on one of the online RF up converters 10, the IF and RF  
10           transfer switches 12A, 12B switch the IF input and the RF output of the faulted  
11           online RF up converter 10 to the backup RF up converter 32. The faulted RF  
12           up converter 10 can now be removed from the redundant RF up converting  
13           system 30 by separating the RF up converter 10 from its I/O switch leaving the  
14           active redundant RF up converting system 30 intact through the I/O switch.

15 (Dkt. #97, p.53). The Special Master concluded that this passage “clearly implies that, in the  
16 event a fault is detected, the system will automatically and promptly switch over to the  
17 backup RF converter. But it also implies that, in order to clear the fault, it may well be  
18 necessary to remove the faulty RF converter from the system, and perhaps replace it with  
19 another. This would of course require human intervention. And after that removal and  
20 replacement, the new or repaired RF converter would be switched back into the system,  
21 either automatically or manually. Obviously, the need for haste is not critical at this end of  
22 the operation, as opposed to the initial switchover upon detection of fault.” (Dkt. #97, pp.  
23 53-54). As such, the Special Master concluded that the presumption that the same word be  
24 given the same meaning throughout the claims of the patent is readily overcome by intrinsic  
25 evidence, i.e., the patent specification. The Court agrees.

26           Radyne argues that the Special Master’s citation to the patent specification does not  
27 establish that it is clear from the patent specification that the word “when” should be given  
28 two different meanings in the different contexts in which it is used in claim 1. Radyne states  
that “[t]he Special Master seemed to confuse the question of how a fault may be cleared with  
the question of when the switching means switches the backup converter means back out of

1 the system. The Special Master seemed to read the [patent specification] as suggesting that  
2 a faulted prime converter must be removed in order to clear a fault.” (Dkt. #86, p.5)  
3 (emphasis in original). However, the Special Master simply recognized that the quoted  
4 patent specification clearly contemplates that human intervention may be necessary in order  
5 to clear a fault, not that it always is required in order to clear a fault. As such, the Special  
6 Master recognized that the patent specification clearly indicates that the use of the word  
7 “when” in the context of “when said first RF converter means is cleared of said fault” does  
8 not have the same urgency and immediacy that is required by the use of the word “when” in  
9 the context of “when said fault is detected.” The Court agrees with the Special Master that  
10 the word “when” is used in two distinct contexts in claim 1, one context in which the patent  
11 specification clearly establishes that immediacy is required, and a second context that  
12 indicates that human intervention may be required and thus immediacy is not necessary. The  
13 patent specification forecloses Radyne’s argument that one could reasonably read the word  
14 “when” in the context of “when said first RF converter means is cleared of said fault” to  
15 mean that the backup converter must be switched out immediately after the fault is cleared  
16 from the system. Accordingly, the Court overrules Radyne’s objection to the Report and  
17 Recommendation in this respect.

18 **B. The Legal Test Under 35 U.S.C. § 112, ¶ 6**

19 Radyne also objects to the Special Master’s recommendation that six of the ten claim  
20 limitations that included the word “means” recited sufficient structure to overcome the  
21 presumption that they are “means plus function” (“MPF”) elements governed by 35 U.S.C.  
22 § 112, ¶ 6. Specifically, Radyne contends that “the Special Master did not follow the correct  
23 rule that should apply when there is a presumption that [35 U.S.C. § 112, ¶ 6] does apply  
24 because the word ‘means’ is used in the claim.” (Dkt. #86, p.6). In opposition, Comtech  
25 states that the Special Master did apply the appropriate test and conduct the appropriate legal  
26 analysis to determine whether claim limitations including the word “means” recited sufficient  
27 structure to overcome the presumption that they are “means plus function” elements under  
28 35 U.S.C. § 112, ¶ 6. In reviewing the Special Master’s Report and Recommendation, the

1 Court finds that the Special Master applied the correct legal test under 35 U.S.C. § 112, ¶ 6  
2 and that the his findings are without error.

3 As noted by the Special Master, “[a]n element in a claim for a combination may be  
4 expressed as a means or step for performing a specified function without the recital of  
5 structure, material, or acts in support thereof, and such claim shall be construed to cover the  
6 corresponding structure, material, or acts described in the specification and equivalents  
7 thereof.” 35 U.S.C. § 112, ¶ 6. The Special Master stated that:

8 Section 112, ¶ 6 operates to cut back on the types of means that could literally  
9 satisfy the claim language to only the disclosed structure or acts and  
10 equivalents thereof. But unless there is a clear basis for it in the record, it is  
11 improper to limit a MPF claim to the particular means set forth in the  
12 specification. Patentees are required to disclose in the specification some  
13 enabling means for accomplishing the function, but there is no requirement  
14 that applicants describe or predict every possible means of accomplishing that  
15 function. . . . Accordingly, each MPF limitation will be construed to cover the  
16 actual structure or acts shown in the specification for accomplishing the recited  
17 function, and equivalents thereof. . . . If the word ‘means’ appears in a claim  
18 element in association with a function, the court presumes that § 112, ¶ 6  
19 applies. This presumption collapses, however, if the claim itself recites  
20 sufficient structure, material, or acts to perform the claimed function. Without  
21 the term ‘means,’ a claim element is presumed to fall outside MPF strictures.  
22 Once again, however, that presumption can collapse when an element lacking  
23 the term ‘means’ nonetheless relies on functional terms rather than structure  
24 or material to describe performance of the claimed function. . . . Once a court  
25 establishes that a MPF limitation is at issue, it must construe that limitation,  
26 thereby determining what the claimed function is and what structures disclosed  
27 in the written description correspond to the ‘means’ for performing that  
28 function.

19 (Dkt. #97, pp. 13-15). As such, the Special Master correctly noted that there is a  
20 presumption of the application of § 112, ¶ 6 that is created by the use of the word “means”  
21 in conjunction with a claim term, and that that presumption may be rebutted if: (1) the claim  
22 element that uses the word “means” recites no function corresponding to the means, or (2)  
23 the claim element also recites sufficient structure or material for performing the function.  
24 Rodime PLC v. Seagate Tech, Inc., 174 F.3d 1294, 1302 (Fed. Cir. 1999) (citation omitted);  
25 see also Biomedino, LLC v. Waters Technologies Corp., 2007 U.S.App. LESIX 14303, at  
26 \*7-8 (Fed. Cir. 2007) (“This presumption can be rebutted when the claim, in addition to the  
27 functional language, recites structure sufficient to perform the claimed function in its  
28 entirety.”). In addition, to determine whether a claim itself “recites sufficient structure” to

1 perform the claimed function in its entirety and thus avoid application of § 112, ¶ 6, the  
2 Special Master correctly cited Lighting World, Inc. v. Birchwood Lighting, Inc., 382, F.3d  
3 1354, 1350 (Fed. Cir. 2004) for the proposition that “it is sufficient if the claim term is used  
4 in common parlance or by persons of skill in the pertinent art to designate structure, even if  
5 the term covers a broad class of structures and even if the term identified the structures by  
6 their function.” (Dkt. #97, pp. 19-20). In the instant case, the Special Master determined  
7 that the § 112, ¶ 6 presumption was raised but rebutted in six out of the ten instances because  
8 the claims recite sufficient structure as the described structure is capable of performing  
9 entirely the recited function.

10 In essence, Radyne relies on the proposition that “§ 112, ¶ 6 applies unless there is  
11 structure recited within the claim itself to perform ‘entirely’ the claimed function” (Dkt. #86,  
12 p.8) (emphasis added). The Court agrees that this is the appropriate test under Federal  
13 Circuit precedent, as indicated by Radyne in its reply brief. (Dkt. #86, pp.8-9). However,  
14 the Court does not agree with Radyne that the Special Master did not correctly apply this test  
15 and consider whether there was sufficient structure recited within the claims at issue to  
16 perform entirely the claimed function. Indeed, Radyne appears to contend that the Special  
17 Master erred in relying on expert testimony and the standard set forth above in Lighting  
18 World to determine whether a claim term recites sufficient structure to rebut the § 112, ¶ 6  
19 presumption because that case dealt with a reverse presumption, i.e., that case involved a  
20 presumption that § 112, ¶ 6 did not apply because the term “means” did not appear in the  
21 claim element. (Dkt. #78, p.12). However, in Personalized Media Communications v.  
22 International Trade Com’n, the Federal Circuit rejected the distinction between regular  
23 presumptions and reverse presumptions under § 112, ¶ 6 and stated that “[i]n deciding  
24 whether either presumption has been rebutted, the focus remains on whether the claim as  
25 properly construed recites sufficiently definite structure to avoid the ambit of § 112, ¶ 6.”  
26 161 F.3d 696, 704 (Fed. Cir. 1998) (emphasis added); see also Technology Licensing Corp.  
27 v. VideoTek, 2002 U.S. Dist. LEXIS 26803 (N.D.Cal. 2002) (“Whether one starts with the  
28 presumption that § 112, ¶ 6 does or does not apply, the test for whether that presumption has

1 been rebutted is the same.”). In determining whether the § 112, ¶ 6 presumption is properly  
2 rebutted the Court considers “evidence intrinsic to the patent and any relevant extrinsic  
3 evidence so warranted.” Personalized Media Communications, 161 F.3d at 704. As such,  
4 the Special Master did not err in determining whether the claims recite sufficient structure  
5 to perform entirely the claimed function by considering how the claim term is used in  
6 common parlance or by persons of skill in the pertinent art to designate structure, even if the  
7 term covers a broad class of structures and even if the term identified the structures by their  
8 function.

9       Specifically, Radyne contends that “[t]he Special Master’s report does not go through  
10 the analysis of (1) specifically identifying what the claimed function is, (2) identifying what  
11 alleged structure is recited within the patent claim itself for performing that function, and (3)  
12 discussing why the alleged structure within the claim itself is sufficient entirely to perform  
13 the claimed function.” (Dkt. #86, p.9). As an example of the Special Master’s allegedly  
14 incorrect analysis to determine whether the § 112, ¶ 6 presumption was rebutted, Radyne  
15 references the Special Master’s report on claim 1 and the element “RF converter means.”  
16 Radyne argues that two functions are claimed in this instance – (1) receiving the inputted IF,  
17 and (2) modulating the inputted IF to the desired RF – and that the term “RF converter” does  
18 not elaborate sufficient structure to perform entirely the recited function because “[a]  
19 ‘converter’ just takes one frequency and changes it to another frequency.” (Dkt. #86, p.10)  
20 (emphasis in original). Radyne cites the declaration of its expert witness, Roderick  
21 Kronschnabel, to support the proposition that “you would need a converter to change the  
22 frequency from one frequency to another, and a modulator to modulate the desired RF  
23 signal,” and thus the term converter by itself, without the term modulator, does not elaborate  
24 sufficient structure to rebut the § 112, ¶ 6 presumption. (Id.).

25       However, the Special Master’s Report and Recommendation addressed and dealt with  
26 Radyne’s specific argument on this issue. (Dkt. #97, p.31). The Special Master stated that  
27 Radyne’s argument is “deceptively simplistic” because “[a]ny electrical engineer knows that  
28 a ‘frequency converter’ can be a simple electromechanical or solid state device that does in

1 fact simply change one frequency to another without mixing or modulation. But in the  
2 context of this case, the subject of the '646 patent is frequency conversion at radio  
3 frequencies, and such an engineer would naturally expect an RF converter to include circuitry  
4 for mixing or modulating an RF signal with an inputted IF signal, or vice-versa.” (Id., p.31  
5 n.59). The Special Master further stated that Radyne’s argument is “pointless in view of the  
6 fact [ ] that the claims expressly require the RF converter means to include the classical  
7 elements for RF modulation: a synthesizer, a reference oscillator, and ‘converter means [ .  
8 .] for receiving and modulating said inputted IF to said desired outputted RF.’” (Id., p.31).  
9 As such, the Special Master properly applied and rejected the § 112, ¶ 6 raised by “RF  
10 converter means,” and concluded, based on the claim language itself, as well as information  
11 in the declaration of Comtech’s expert witness, Stephen Heppe, that an “RF converter” is a  
12 well-understood structure in the relevant art that includes the function of “modulating”  
13 without the need for specifically referencing a modulator as part of the structure.  
14 Accordingly, the Court overrules Radyne’s objection to the Report and Recommendation in  
15 this respect.

## 16 17 **V. SUMMARY**

18 The Court, based on de novo review, sustains Comtech’s objection to the Special  
19 Master’s Report and Recommendation that claim 7 of the '646 patent is indefinite and should  
20 be held invalid under 35 U.S.C. 112, ¶ 2. Instead, the Court adopts Comtech’s proposed  
21 correction to rewrite the last three limitations of claim 7 of the '646 patent by switching  
22 “inputted IF” and “desired RF” with “inputted RF” and “desired IF”, as shown in Exhibit 2  
23 of Radyne’s response in opposition to Comtech’s motion to adopt the Special Master’s  
24 Report and Recommendation with one modification. (Dkt. #85). In addition, the Court,  
25 based on de novo review, overrules Radyne’s objections to the Special Master’s Report and  
26 Recommendation and finds that the Special Master’s construction of the term “when” and  
27 application of the legal test for determining whether 35 U.S.C. § 112, ¶ 6 governs certain  
28

1 claim elements of the '646 patent is supported by case law and the principles of claim  
2 construction.

3 **Accordingly,**

4 **IT IS HEREBY ORDERED** that the Special Master's Report and Recommendation  
5 on claim construction is adopted in part as the Order of the Court. (Dkt. #97).

6 **IT IS FURTHER ORDERED** sustaining Plaintiff's objection to the Report and  
7 Recommendation. (Dkt. #76). Plaintiff's objection to the Special Master's recommendation  
8 that claim 7 be held invalid under 35 U.S.C. § 112, ¶ 2 is sustained.

9 **IT IS FURTHER ORDERED** that Plaintiff's motion to adopt the Special Master's  
10 Report and Recommendation with one modification is GRANTED. (Dkt. #76).

11 **IT IS FURTHER ORDERED** overruling Defendant's objections to the Report and  
12 Recommendation. (Dkt. #78). Defendant's objections to the Special Master's  
13 recommendations regarding construction of the term "when" and the applicability of 35  
14 U.S.C. § 112, ¶ 6 are overruled.

15 **IT IS FURTHER ORDERED** that Defendant's motion to modify the Special  
16 Master's Report and Recommendation is DENIED.

17 **IT IS FURTHER ORDERED** that Plaintiff's motions to strike are DENIED. (Dkt.  
18 #s 66, 68, 87).

19 **IT IS FURTHER ORDERED** setting this matter for a status hearing on May 8, 2008  
20 at 3:00 p.m. to discuss future proceedings in this litigation.

21 DATED this 31<sup>st</sup> day of March, 2008.

22  
23  
24  
25  
26  
27  
28



---

Mary H. Murgula  
United States District Judge